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动物分类学报

中国麦穗鱼属一新种 (鲤形目, 鲤科)

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摘　要　作者于 2001 年在广东省潮州市凤凰山天池采到鲤科鱼类 8 尾, 经鉴定为 1 新种, 定名为断线麦穗鱼 *Pseudorasbora interrupta* sp. nov.。新种口上位、无口须, 归入麦穗鱼属。新种与同属的麦穗鱼 *Pseudorasbora parva* (Temminck *et* Schlegel) 相似, 但有如下鉴别特征: 侧线不完全, 侧线鳞仅 7~ 15 枚; 体较低, 不及头长; 上颌骨侧突和下颌骨冠状突较不发达。

关键词　鲤科,　亚科, 麦穗鱼, 新种.
中图分类号　Q959. 468

麦穗鱼属 *Pseudorasbora* 隶属于鲤形目 Cypriniformes 鲤科 Cyprinidae　亚科 Gobioninae。目前已知中国记载有麦穗鱼 *P. parva* 和长麦穗鱼 *P. elongate* 2 种, 其中麦穗鱼在国内广泛分布, 也分布到越南北部、朝鲜半岛和日本。在日本另有 *P. pumila* 的 *P. pumila pumila* 和 *P. pumila* subsp 2 个亚种。

2001 年笔者在广东省潮州市进行鱼类资源调查时, 于凤凰山山顶天池采得鱼类标本 8 尾, 经鉴定为麦穗鱼属 1 新种, 描述如下。

断线麦穗鱼, 新种 *Pseudorasbora interrupta* **sp. nov.** (图 1)

正模标本: 编号 01 VI1001, 全长 67.0 mm, 标准长 55.0 mm, 2001 年 6 月采自广东省潮州市凤凰山天池 (23°53′N; 116°39′E), 海拔约 1 400 m。标本保存于华南师范大学生命科学学院鱼类标本室。

副模标本: 7 尾, 编号 01 VI1002 ~ 01 VI1008, 全长 30.5~ 42.2 mm, 标准长 26.0~ 36.8 mm, 分别于 2001 年 6 月和 10 月采于凤凰山天池。标本保存于华南师范大学生命科学院鱼类标本室。

新种全长 30.5 ~ 67.0 mm, 标准长 26.0 ~ 55.0 mm。背鳍条 ii-7; 胸鳍条 i-15; 腹鳍条 i-8; 臀鳍条 iii-6。侧线不完全, 侧线鳞 7~ 15; 侧列鳞 $35\frac{6.5}{5}36$。第 1 鳃弓外侧鳃耙 7。下咽齿 1 行, 5/5。

标准长为体高的 4.34~ 5.72 (5.0) 倍, 为头长的 3.70~ 4.36 (3.99) 倍, 为尾柄长的 4.00~ 4.74 (4.34) 倍, 为尾柄高的 9.43~ 13.00 (10.57) 倍。头长为吻长的 3.32~ 4.58 (3.95) 倍, 为眼径的 2.89~ 3.54 (3.25) 倍, 为眼间距的 2.50 ~ 3.04 (2.71) 倍; 尾柄长为尾柄高 2.07~ 2.86 (2.46) 倍。

体修长、侧扁。体高小于头长, 尾柄高小于眼后头长。头后背部稍隆起。吻尖。口上位, 斜裂, 下颌位于上颌斜前方。上下颌无口须。鼻孔位于眼的正前方, 鼻瓣膜发达。眼大, 眼径显著大于吻长; 围眶骨系除泪骨较大外, 其余均呈杆状。鳃盖膜在前鳃盖骨后缘处下方鳃峡相连。

背鳍外缘稍内凹, 最后一根不分支鳍条柔软。背鳍起点稍前于腹鳍起点, 至吻端与至尾鳍基距离约相等。胸鳍向后不伸达腹鳍起点, 而腹鳍向后伸达臀鳍起点。尾鳍叉状, 分叶末端钝圆。鳞片中等大; 侧线不完全, 侧线鳞 7 ~ 15 枚, 之后侧线不存在; 侧列鳞的上方和下方鳞片稍大。在酒精中保存的标本, 体浅灰绿色; 体中部有一纵带从吻部贯穿至尾柄末端; 除臀鳍浅灰色外, 其他各鳍微灰绿色。

新种下咽齿 1 行, 5/5; 臀鳍分支鳍条 6 根, 根据这些特征应归入　亚科。据其口小, 口上位; 无口须; 鳃耙不发达等特点归入麦穗鱼属 *Pseudorasbora* Bleeker, 1860。

新种与东亚广布种麦穗鱼 *P. parva* 相近, 但两者具有明显不同的特征。1) 新种侧线不完全, 在体中轴前部 7~ 15 枚鳞片上出现侧线孔; 而麦穗鱼 *P. parva* 侧线完全, 侧线鳞 35~ 37; 2) 新种口裂较深, 其深度为眼径的一半; 上颌骨较细长, 侧突不发达; 下颌骨冠状突起低, 后端无显著延长的刺状突起。而麦穗鱼口裂浅, 其深度不及眼径的一半; 上颌骨较粗, 侧突宽大发达; 下颌骨冠状突起高, 且有大的裂口, 后端有显著延长的刺状突起 (图 2~ 3) 新种体较低, 较头长短; 麦穗鱼体高明显, 等于或大于头长。新种亦不同于分布于日本的 *P. pumila*

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图 1 断线麦穗鱼，新种 *Pseudorasbora interrupta* sp. nov.

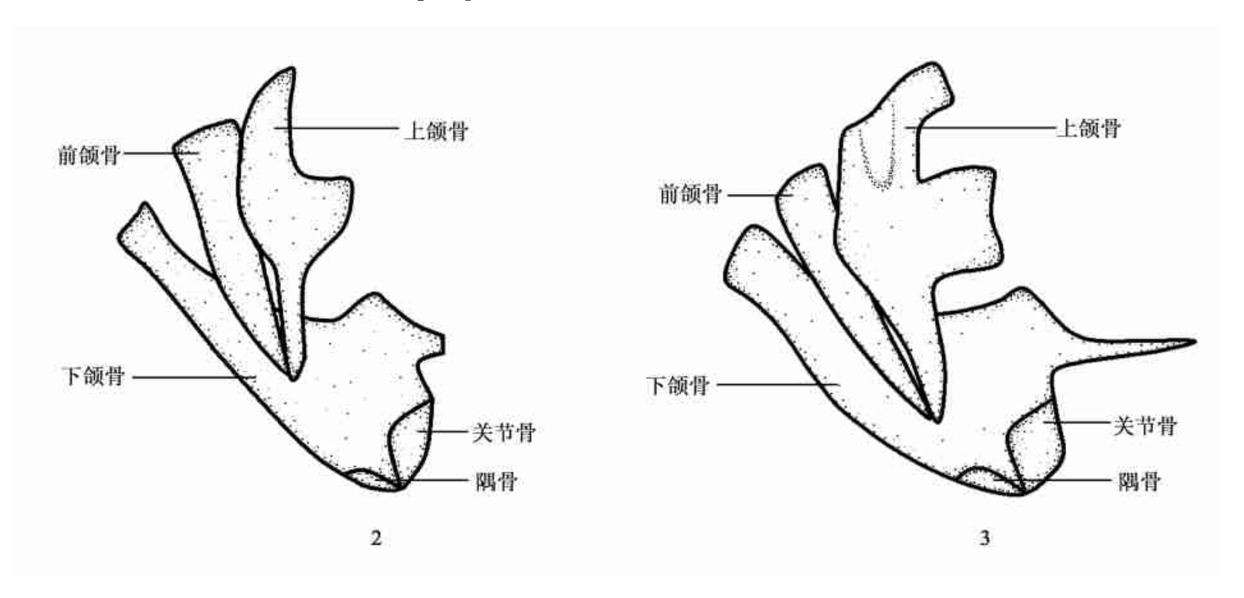


图 2~3 断线麦穗鱼与麦穗鱼上、下颌的比较

Figs 2-3. Comparisons of the upper jaw and the lower jaw between *Pseudorasbora interrupta* sp. nov. and *P. parva*.

2. 断线麦穗鱼，新种 *Pseudorasbora interrupta* sp. nov. 3. 麦穗鱼 *P. parva*

前颌骨 Premoxillary 上颌骨 Maxillary 下颌骨 Mandibular 关节骨 Articular 隅骨 Angular

pumila Miyadi 和 *P. pumila uchida* Okada *et* Kubota，虽然它们侧线都不完全，但后者侧线鳞数目很少，仅 3~5 枚；且 *P. pumila pumila* 和 *P. pumila* subsp. 体型较粗，与新种有明显的不同，它们之间的关系有待进一步分析和探讨。

比较采于凤凰山附近揭西县的 10 尾麦穗鱼 *P. parva*，结果两者在标准长/体高、标准长/尾柄高、尾柄长/尾柄高及侧线鳞数目上有明显差异（表 1）。

新种仅分布于凤凰山山顶天池。凤凰山天池呈北西走向，由新构造活动的断层所生成，系一断陷湖。推测新种是在凤凰山明显隆起为高山后于低温的水环境中逐渐演化出来的。虽然间冰期气候的转暖为许多鱼类重返家园提供了机会，但高耸的凤凰山山顶对众多淡水鱼类来说已成为不可逾越的障碍。而山顶长期的低温以及少有竞争者为该种的生存发展提供了有利的条件，使其独立繁衍至今。

表1 断线麦穗鱼与麦穗鱼的可数和可量性状比较

Table 1. Comparisons of counts and measurements between *Pseudorasbora interrupta* **sp. nov. and** *P. parva*.

性状 Characters	断线麦穗鱼, 新种 *P. interrupta* sp. nov. ($n = 8$)	麦穗鱼 ($n = 10$) *P. parva*
标准长/体高 Standard length/body depth	4.34~5.72 (5.0)	3.78~4.29 (4.03)
标准长/头长 Standard length/head length	3.70~4.36 (3.99)	4.09~4.72 (4.30)
标准长/尾柄长 Standard length/caudal length	4.0~4.74 (4.34)	3.75~4.87 (4.25)
标准长/尾柄高 Standard length/depth of caudal peduncle	9.43~13.0 (10.57)	6.98~7.84 (7.57)
头长/吻长 Head length/snout length	3.32~4.58 (3.95)	3.00~3.70 (3.32)
头长/眼径 Head length/eye diameter	2.89~3.54 (3.25)	3.00~3.58 (3.26)
头长/眼间距 Head length/interorbital width	2.50~3.04 (2.71)	2.29~3.13 (2.73)
尾柄长/尾柄高 Length/depth of caudal peduncle	2.07~2.86 (2.46)	1.54~2.00 (1.79)
侧线鳞 Lateral line scales	7~15 (11)	35~37 (36.3)

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A NEW SPECIES OF THE GENUS *PSEUDORASBORA* FROM GUANGDONG PROVINCE, CHINA (CYPRINIFORMES, CYPRINIDAE)

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Abstract *Pseudorasbora interrupta* sp. nov. is described on 8 specimens collected from the top lake of Fenghuang Mountain (23°55′N, 116°36′E), Chaozhou City, Guangdong Province, China in 2001. The new species belong to the genus Pseudorasbora since its mouth is oblique and without barbel on jaws. It closely resembles *P. parva* (Temminck et Schlegel) distributed in east Asia, but differs from latter as follows: an incomplete lateral line scales, a lower body depth which is always shorter than head length and a weak lateral process of maxilla bone. Meanwhile, it also resembles *P. pumila* distributed in Japan with incomplete lateral line scales, but differs from the latter in the number of lateral line scales with 7-15 vs. 3-5.

Holotype No. 01VI1001, total length 67.0 mm, standard length 55.0 mm, Paratypes No. 01VI1002-01VI1008, total length 30.5-42.2 mm, standard length 26.0-36.8 mm. All type specimens are deposited in Fish Collection Room, College of Life Science, South China Normal University, Guangzhou, China.

The total length of the new species is 30.5-67.0 mm, and the standard length 26.0-55.0 mm. D iii-7; P i-15; V i-8; A iii-6. Gill rakers on outer of the first arch 7, lower pharyngeal teeth 1 row 5/5. Lateral line incomplete, lateral line scales 7-15, and lateral row scales $35\frac{6.5}{5}36$.

Depth in standard length is 4.34-5.72 (mean 5.0), head 3.70-4.36 (3.99), caudal length 4.00-4.74 (4.34), and caudal depth 9.43-13.0 (10.57). Snout in head length is 3.32-4.58 (3.95), eye diameter 2.80-3.54 (3.25), interorbital space 2.52-3.04 (2.71). Caudal peduncle depth in caudal peduncle length 2.07-2.86.

Body elongated and laterally compressed. The body depth is shorter than the head length, and the caudal depth is shorter than the head length after the eyes. The dorsal profile is a bit convex. Snout point, mouth oblique and superior, lower jaw located before upper jaw, no barbel on jaws. Nostrils just in front of eyes, nasal valves developed. Eyes large, its diameter is obviously longer than the snout length. The circular orbital bones degenerated into pole-like except for lachrymal bones which were large and sticklike. Gill membranes connected to isthmus just below the post-edge of preoperculars.

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Profile of the outer margin of dorsal fin with moderately concave, and the last unbranched fin-ray of dorsal fin is soft. The origin of dorsal fin is located about in middle of body and before the origin of ventral fin; the distance from the origin of dorsal fin to snout and the one to caudal fin are nearly the same. Pectoral fin not reached backward the origin of ventral fin, while the ventral fin reached backward the origin of anal fin. The caudal fin is forked with an obtuse end. Scales moderate size and those above or below lateral line are a bit larger. Its lateral line is incomplete, stopping at the 7-15 scales. The body reserved in alcohol is light celadon, a dark longitudinal strip exists from snout origin to the terminal of caudal peduncle, fins are light dark except the anal fin is light gray.

Key words Cyprinidae, Gobioninae, Pseudorasbora, new species, China.